



## Appendix D

Excerpts from "Comments of The Ultra-Wideband Working Group, In the Matter of Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems" dated 8 December 1998.

*Note: bold emphasis added*

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"The NOI asks about the possibility of notch filters as a means to lower emissions in the television and the restricted bands. **Unfortunately, notch filters will degrade the performance of UWB systems to the extent that the enhancements this technology provides over traditional approaches, and the unique applications that only UWB can support, will be nullified and the systems no longer be viable.** Notch filters that would not significantly distort UWB waveforms would not be true "notch" filters but rather filters with large stop bands. Between 1.0 GHz and 5.0 GHz, the restricted bands take up almost 50 % of the spectrum. Thus, if multiple notch filters were required, the overlapping filters would effectively become an attenuator. **This would result in a significant loss of energy if UWB technologies were forced to notch out the restricted bands, and would also greatly distort the waveforms that make the technology so unique and beneficial. The insertion of filters with their inherent losses and distortions to suppress emissions in these multiple non-adjacent bands would so impair the technology as to render it impractical.**

"The television bands present a similar challenge. When the Commission revised the Part 15 regulations in 1989, it appears that a concerted effort was made to avoid allowing the use of television broadcast spectrum for most intentional radiators because of the fear that Part 15 devices would gravitate generally to vacant TV channels without regard to interference to TV reception or the other uses being made of that spectrum. UWB use, however, is not likely to move toward the TV bands for the same reason. Instead, **UWB emissions that fall into the TV bands will do so because of the particular nature of the UWB application and the UWB waveform.**"